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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/646,880	01/26/2001	Pierre Jeanvoine	198164US0PCT	4136

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EXAMINER

COLAIANNI, MICHAEL

ART UNIT	PAPER NUMBER
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1731

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DATE MAILED: 09/26/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.  
09/646,880

Applicant(s)  
Jeanvoine

Examiner  
Michael Colaianni

Art Unit  
1731



-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136 (a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on Jan 26, 2001
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-18 is/are pending in the application.
- 4a) Of the above, claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-18 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claims \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.  
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

## Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some\* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \*See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s). \_\_\_\_\_ 6) ☐ Other: \_\_\_\_\_

Art Unit: 1731

***Claim Rejections - 35 USC § 112***

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Regarding claims 1-18, the phrase "for example" renders the claim indefinite because it is unclear whether the limitation(s) following the phrase are part of the claimed invention. See MPEP § 2173.05(d).

Regarding claims 1-18, the phrase "such as" renders the claim indefinite because it is unclear whether the limitations following the phrase are part of the claimed invention. See MPEP § 2173.05(d).

2. Claim 1-18 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 17 uses the language "preferably" which renders the claim indefinite because it is not clear if what follows "preferably" is intended to be part of the claim.

***Claim Objections***

3. Claims 9, 17 are objected to because of the following informalities: claim 9, "optionally" is misspelled; claim 17, "polluted" is misspelled. Appropriate correction is required.

Art Unit: 1731

*Claim Rejections - 35 USC § 102*

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless -

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

5. Claims 1, 3-4, 5-6, 8, 13, 18 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Cornelius 2154439 in further view of Carroll et al. 5785940.

Cornelius teaches forming silicates from halogenated materials and silica by heating with submerged electrodes (page 1, col. 2, lines 9-14, Fig. 6, ref. no. E; page 3, col. 1, lines 15-21). Cornelius also appears to teach that the electrodes may be substituted with a gas or oil burner (page 3, col. 1, lines 15-21). Thus, it appears that Cornelius teaches submerged burners because the for the burners to replace the electrodes, they would have to be submerged. Cornelius also teaches using fuel oil as the fuel source (page 3, col. 1, lines 20-21). Cornelius also inherently teaches that the burners would provide for the mixing of the glass melt because submerged burners would inherently mix the glass melt by virtue of their expulsion of the combustion gases. Moreover, the burning of fossil fuels (oil, gas, etc.) inherently has water produced as a side product. Thus, a portion of the water used in the halide reaction would be provided by the burners. Also, Cornelius teaches forming chlorinated derivatives, such as hydrogen chloride (page 1, col. 2, line 14). Cornelius teaches forming silicate glass from the silicate (page 5, col. 1,

Art Unit: 1731

lines 63-64. Cornelius also teaches that the silicate formed is fed hot into a furnace (page 5, col. 1, lines 54-59).

However, in the alternative, Carroll et al. teaches that it is known in the silicate reactor art to use submerged burners to form the silicate material (col. (Fig 2. ref. no. 110).

It would have been prima facie obvious at the time the invention was made to combine Carroll's submerged burners with Cornelius' method and apparatus for making silicate because Cornelius teaches using submerged heaters to melt the silicate forming materials and substituting gas burners for the submerged heaters. In view of Carroll's teachings it would be obvious to use submerged burners in place of the submerged electrodes.

### ***Claim Rejections - 35 USC § 103***

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.

Art Unit: 1731

2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

8. Claims 2 is rejected under 35 U.S.C. 103(a) as being unpatentable over Cornelius 2154439 in further view of Carroll et al. 5785940.

Cornelius teaches applicant's claimed invention. See the 102(b)/103(a) rejection for Cornelius' teaching. However, Cornelius does not teach feeding the burners with air.

However, Carroll et al. teach that it is well known to feed submerged burners with air or oxygen-enriched air (col. 5, lines 5-14).

It would have been prima facie obvious at the time the invention was made to combine Carroll's teaching of using air or oxygen enriched air as the oxidant in the burner with Cornelius' burner because such is well known in the art that an oxidant must be used to burn fuel to produce the heat. Moreover, using oxygen enriched air would produce a higher temperature flame to produce quicker melting and better refining of the glass.

9. Claims 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over Cornelius 2154439 in further view of Carroll et al. 5785940 and Delwel et al. 5340559.

Cornelius teaches applicant's claimed invention. See the 102(b)/103(a) rejection for Cornelius' teaching. However, Cornelius does not teach granulating the formed silicate.

Art Unit: 1731

However, Delwel et al. teach that it is well known to granulate formed silicate materials for further use (col. 2, lines 50-52).

It would have been prima facie obvious at the time the invention was made to combine Delwel et al.'s teachings with Cornelius in view of Carroll because doing so would provide for easier transport of the product and would prevent excessive dust clouds and other environmental hazards.

10. Claims 9-12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Cornelius et al. 2154439 in view of Jeanvoine et al. WO 99/35099.

Cornelius teaches applicant's claimed invention. See the 102(b)/103(a) rejection for Cornelius' teachings. Cornelius also inherently teaches that the furnace is made of refractory material because refractory materials are required for high temperature use, such as in glass making furnaces. Cornelius also teaches in a cylindrical structure (Fig. 9). Cornelius also treats the chloride that is formed (page 5, col. 1, lines 8-35). However, Cornelius does not teach introducing the batch material below the level of the solid type combustibles.

However, Jeanvoine et al. teach that it is known to inject feed materials below the level of the glass melt (page 19, lines 15-17).

It would have been prima facie obvious at the time the invention was made to combine Jeanvoine et al.'s below glass melt injection with Cornelius et al.'s method of making silicate because injecting the materials beneath the glass level will promote better mixing of the components and thus result in a more homogenous product.

Art Unit: 1731

11. Claims 14-17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Cornelius 2154439 in view of Carroll et al. 5785940.

Cornelius teaches applicant's claimed invention. See the 102(b)/103(a) rejection for Corneilus' teachings. However, Cornelius in view of Carroll et al do not teach the subject matter of claims 14-17.

However, the silicate material produced by Cornelius can be put to multiple uses including a host of uses, such as detergent, glass batch amongst others.

It would have been prima facie obvious at the time the invention was made to use Cornelius in view of Carroll's silicate material for the host of uses claimed by applicant because doing so would increase the versatility of the silicate material.

### ***Conclusion***

12. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael Colaianne whose telephone number is 703-305-5493. The examiner can normally be reached on Monday to Friday from 8:00 AM to 4:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Steven Griffin, can be reached on (703) 308-1164. The fax phone number for the organization where this application or proceeding is assigned is 703-305-7115.



Art Unit: 1731

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0651.

A handwritten signature in black ink, appearing to read "Michael Colaianni", with a stylized flourish at the end.

**MICHAEL COLAIANNI**  
**PRIMARY EXAMINER**

Art Unit 1731  
September 20, 2002